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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,871	02/25/2005	Akira Hommi	12699/19	2062

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WASHINGTON, DC 20005

EXAMINER

NGUYEN, CHUONG P

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/525,871

Applicant(s)

HOMMI ET AL.

Examiner

Chuong Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-17 is/are pending in the application.
- 4a) Of the above claim(s) 5-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/25/06 & 6/22/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of invention IA, species A1, and species B1 in which applicants believe claims 2-9 are readable upon in the reply filed on 08/11/2006 is acknowledged.
2. Claims 10-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 08/11/2006.

In addition, Examiner has found that claims 5-7 are readable upon species B2 (Specification - page 6, line 8 - page 7, line 19) and claims 8 and 9 are readable upon species B3 (Specification - page 7, line 20 - page 8, line 17). Therefore, claims 5-9 are also withdrawn from further consideration.

Information Disclosure Statement

3. The information disclosure statement filed 06/22/2006 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Regarding the information disclosure statement filed 06/22/2006, Cite No. 1, 2, 3, and 4 are not considered. However, they will be placed in the application file for future references.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 2-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 2-4, “predetermined reference value”, “predetermined rate” and “predetermined time” are indefinite since one skilled in the art could not understand their limitation and how and in what manner these rate and time are determined. The metes and bound of the claim cannot be ascertained by one having ordinary skill in the art.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saji Kenji (JP 06130078).

Regarding claim 2, Saji discloses a road surface condition change estimation apparatus comprising: a condition change estimation module that estimates the change of the road surface condition ([0007] - [0010]). However, Saji lacks a rotation angular acceleration measurement module that measures a rotation angular acceleration of a drive shaft. Because, this rotation acceleration is the measurement of a rotation angular acceleration of a drive shaft that is linked to the wheels and is the same as the wheel acceleration; therefore, measuring the rotation angular acceleration and measuring wheel acceleration are both art-equivalent. The selection of any of these known equivalents would be within the level of ordinary skill in the art.

Regarding claim 3, Saji discloses the condition change estimation module estimates the change of the road surface condition based on wheel acceleration in response to a variation in period of a time change of the measured wheel acceleration at or over a predetermined rate ([0007] – [0013]). However, Saji lacks a variation in period of a time change of the measured rotation angular acceleration at or over a predetermined rate. However, this rotation acceleration is the measurement of a rotation angular acceleration of a drive shaft that is linked to the wheels and is the same as the wheel acceleration; therefore, measuring the rotation angular acceleration and measuring wheel acceleration are both art-equivalent. The selection of any of these known equivalents would be within the level of ordinary skill in the art.

Regarding claim 4, Saji lacks the condition change estimation module estimates an abrupt increase in friction coefficient on the road surface, when the period of the time change of the measured rotation angular acceleration in an opposite peak detected immediately after a first peak, which appears after an increase of the rotation angular acceleration to or over a predetermined reference value, is shorter than the period of the time change in the first peak by

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or over the predetermined rate. However, it is known in the art of signal / pulse that an abrupt increase in the signal / pulse yields to the period of the time change of an abrupt increase peak is short than the period of the time change in the first peak. Therefore, it would have been obvious that Saji's condition change estimation module would be concerned with the estimation of an abrupt increase in friction coefficient on the road surface, when the period of the time change of the measured rotation angular acceleration in an opposite peak detected immediately after a first peak, which appears after an increase of the rotation angular acceleration to or over a predetermined reference value, is shorter than the period of the time change in the first peak by or over the predetermined rate since this is well known in the art.

Conclusion

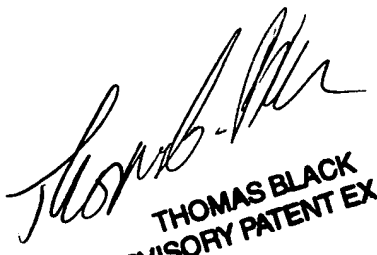
8. The cited prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong Nguyen whose telephone number is 571-272-3445. The examiner can normally be reached on 8:00 - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CN


THOMAS BLACK
SUPERVISORY PATENT EXAMINER